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aatgggaaat tcagggtcaa ggccacactg actgcagaca aatcctccag cacagcctac
                                                                      240
atggatatca gcagcctgac atctgaggac tctgcggtct acttctqtqc aaqaqqctat
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<210>
      118
<211>
       118
<212>
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<213> Mus musculus
<400> 118
Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala
                5
Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Ser
            20
                                                    30
Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
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Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe 55 Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 75 Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 -Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100 105 Leu Val Thr Val Ser Ala 115 <210> 119 <211> 336 <212> DNA <213> Mus musculus <400> 119 gatattgtga tgactcaggc tgcaccctct atacctgtca ctcctggaga qtcaqtatcc 60 atctcctgta ggtctagtaa gagtctcctg catagtaatg gcaacactta cttgtattgg 120 ttcctgcaga ggccaggcca gtctcctcaa ctcctgatat atcggatgtc caaccttgcc 180 tcaggagtcc cagataggtt cagtggcagt gggtcaggaa ctgctttcac actgaqaatc 240 agtagagtgg aggctgagga tgtgggtgtt tattactgta tgcaacatat agaatatcct 300 tttacgttcg gatcggggac caagctggaa ataaaa 336 <210> 120 <211> 112 <212> PRT <213> Mus musculus <400> 120 Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

25

20

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 121

<211> 762

<212> DNA

<213> Mus musculus

<400> 121

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<210> 122

<211> 254

<212> PRT

<213> Mus musculus

<400> 122

Met Glu Trp Pro Leu Ile Phe Leu Phe Leu Leu Ser Gly Thr Ala Gly 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys 20 25 30

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe 35 40 45

Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu 50 55 60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn 65 70 75 80

Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Ser 90 95

Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val 100 105 110

Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Ser Asp Ile 130 135 140

Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly Glu Ser 145 150 155 160

Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly
165 170 175

Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln
180 185 190

Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg 195 200 205

Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg 210 215 220

Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu 225 230 235 240

Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys 245 250

<210> 123

<211> 635

<212> PRT

<213> Homo sapiens

<400> 123

Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu Leu Leu Ala 1 5 10 15

Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala 20 25 30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu 35 40 45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln 50 55 60

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser 70 75 80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro 85 90 95

Asp Gln Glu Val Arg Leu Phe Phe Pro Leu His Leu Trp Val Lys
100 105 110

Asn Val Phe Leu Asn Gln Thr Arg Thr Gln Arg Val Leu Phe Val Asp 115 120 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly 130 135 140

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro 165 170 175 Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr 180 $$185\$

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
195 200 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln 210 215 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser 225 230 235 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu 245 250 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp 260 265 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly 275 280 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln 290 295 300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala 305 310 315 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu 325 330 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val 355 360 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu 385 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp 405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
420 425 430

Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro 465 470 475 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr 485 490 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu 500 505 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu 515 520 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg 530 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys 545 550 555 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu 565 570 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ala Gln Met Asp Tyr Arg
580 585 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro 595 600 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His 610 615 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro 625 630 635

<210> 124

<211> 122

<212> PRT

<213> Mus musculus

<400> 124

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Thr Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Trp Ile Leu Ala Asp Gly Gly Tyr Ser Phe Ala Tyr Trp 100 105 110

Gly Gln Gly Thr Leu Val Thr Val Ser Ala 115 120

<210> 125

<211> 112

<212> PRT

<213> Mus musculus

<400> 125

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 40

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 75

Ser Arg Val Glu Ala Glu Asp Val Gly Ile Tyr Tyr Cys Met Gln His 85 90

Leu Glu Tyr Pro Phe Thr Phe Gly Thr Gly Thr Lys Leu Glu Ile Lys 100 105

<210> 126 <211> 118

<212> PRT

<213> Mus musculus

<400> 126

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 40

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 95

Ala Arg Gly Tyr Ala Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100

Leu Val Thr Val Ser Ala 115

<210> 127

<211> 112

<212> PRT

<213> Mus musculus

<400> 127

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 128

<211> 118

<212> PRT

<213> Mus musculus

<400> 128

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45 Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Asn Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Phe Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 129

<211> 112

<212> PRT

<213> Mus musculus

<400> 129

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Ala Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 70 75 80

Ser Arg Val Glu Thr Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

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<210> 130
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<211> 118

<212> PRT

<213> Mus musculus

<400> 130

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Ser Ser Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile
35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Ser Gly Tyr Ala Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100 105 110

Leu Val Thr Val Ser Ala 115

<210> 131

<211> 112

<212> PRT

<213> Mus musculus

<400> 131

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys 100 105 110

<210> 132

<211> 118

<212> PRT

<213> Mus musculus

<400> 132

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Arg Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 75 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Ser Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 133

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<211> 112
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- <212> PRT
- <213> Mus musculus

<400> 133

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

- <210> 134
- <211> 118
- <212> PRT
- <213> Mus musculus

<400> 134

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Arg Ala Phe Gly Tyr Ala Phe Ser Asn Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 135

<211> 112

<212> PRT

<213> Mus musculus

<400> 135

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly

1 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Ala Ala Phe Thr Leu Arg Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 136

<211> 115

<212> PRT

<213> Mus musculus

<400> 136

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Tyr 20 25 30

Trp Val Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile His Pro Ser Asp Ser Glu Thr His Cys Asn Gln Lys Phe 50 55 60

Lys Arg Lys Ala Thr Leu Thr Val Asn Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Ile Gln Leu His Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys 85 90 95

Thr Ser Gly Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr
100 105 110

Val Ser Ala 115

<210> 137

<211> 112

<212> PRT

<213> Mus musculus

<400> 137

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser 20 25 30

Asn Gly Asn Ile Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile

65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His $85 \hspace{1.5cm} 90 \hspace{1.5cm} 95$

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 138

<211> 118

<212> PRT

<213> Mus musculus

<400> 138

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Ser 20 . 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Asn Asn Gly Lys Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100 105 . 110

Leu Val Thr Val Ser Ala 115

<210> 139

<211> 112

<212> PRT

<213> Mus musculus

<400> 139

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Ala Ala Phe Thr Leu Arg Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 140

<211> 118

<212> PRT

<213> Mus musculus

<400> 140

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Thr Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Ala Asn Tyr Asn Gly Lys Phe 50 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Ser Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95 Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 141

<211> 112

<212> PRT

<213> Mus musculus

<400> 141

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Met Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Val Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys 100 105 110

<210> 142

<211> 118

<212> PRT

<213> Mus musculus

<400> 142

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser

20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Pro Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe 50 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Val Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Tyr Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 143

<211> 112

<212> PRT

<213> Mus musculus

<400> 143

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile-65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 144

<211> 118

<212> PRT

<213> Mus musculus

<400> 144

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Leu Asn Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Arg Ser 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Asn Tyr Asn Gly Lys Phe 50 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Thr Thr Ala Tyr 65 70 75 80

Met Gln Phe Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys
85 90 95

Ala Arg Gly Asp Gly Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 145

<211> 112

<212> PRT

<213> Mus musculus

<400> 145

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser

20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 146

<211> 115

<212> PRT

<213> Mus musculus

<400> 146

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Arg Pro Gly Ala 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr 20 25 30

Trp Val Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile His Pro Tyr Asp Ser Glu Thr His Tyr Asn Gln Lys Phe 50 55 60

Lys Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Ile Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys 85 90 95

Ala Ser Gly Gly Trp Phe Ala Ser Trp Gly Gln Gly Thr Leu Val Thr 100 105 110

Val Ser Ala 115

<210> 147

<211> 112

<212> PRT

<213> Mus musculus

<400> 147

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Thr Ile 70 75 80

Ser Ser Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 148

<211> 115

<212> PRT

<213> Mus musculus

<400> 148

Gln Val Gln Leu Gln Gln Pro Gly Ala Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Arg Gly Leu Glu Trp Ile 35 40 45 Gly Arg Ile His Pro Phe Asp Ser Glu Thr His Cys Ser Gln Lys Phe 50 55 60

Lys Asn Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Asn Thr Ala Tyr 65 70 75 80

Ile Gln Phe Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys 85 90 95

Ser Ser Gly Gly Trp Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr 100 105 110

Val Ser Ala 115

<210> 149

<211> 112

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<213> Mus musculus

<400> 149

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Ser Val Thr Pro Gly

1 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Ser 20 25 30

Asn Gly Asn Ile Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

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<210> 150
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<211> 118

<212> PRT

<213> Mus musculus

<400> 150

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Thr Asn Ser 20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe 50 55 60

Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Glu Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100 105 110

Leu Val Thr Val Ser Ala 115

<210> 151

<211> 112

<212> PRT

<213> Mus musculus

<400> 151

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Asn 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 152

<211> 118

<212> PRT

<213> Mus musculus

<400> 152

Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Asn Ser 20 25 30

Trp Met Asn Trp Val Asn Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Asp Thr Ile Tyr Asn Gly Asn Phe 50 55 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Ile Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Thr Ser Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ala 115

<210> 153

<211> 112 <212> PRT <213> Mus musculus <400> 153 Asp Ile Val Met Thr Gln Ala Ala Pro Ser Leu Pro Val Thr Pro Gly 10 Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 25 20 Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 40 Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 55 Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile 80 Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 Leu Glu Tyr Pro Tyr Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys 100 105 <210> 154 <211> 423 <212> DNA <213> Mus musculus <220> <221> CDS <222> (1)..(423) <400> 154 atg gtt ctt gcc agc tct acc acc agc atc cac acc atg ctg ctc ctg 48 Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu 10 ctc ctg atg ctg gcc cag ccg gcc atg gcg gaa gtg aag ctg gtg gag 96 Leu Leu Met Leu Ala Gln Pro Ala Met Ala Glu Val Lys Leu Val Glu 20 25 tet ggg gga gge tta gtg aag eet gga ggg tee egg aaa ete tee tgt 144

Ser Gly Gly Gly Leu Val Lys Pro Gly Gly Ser Arg Lys Leu Ser Cys

40

35

Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr Thr Met Ser Trp Val Arg 50 55 60	192
cag act ccg gcg aag agg ctg gag tgg gtc gca acc att agt agt ggc Gln Thr Pro Ala Lys Arg Leu Glu Trp Val Ala Thr Ile Ser Ser Gly 65 70 75 80	240
agt agt acc atc tac tat gca gac aca gtg aag ggc cga ttc acc atc Ser Ser Thr Ile Tyr Tyr Ala Asp Thr Val Lys Gly Arg Phe Thr Ile 85 90 95	288
tcc aga gac aat gcc aag aac acc ctg ttc ctg caa atg acc agt cta Ser Arg Asp Asn Ala Lys Asn Thr Leu Phe Leu Gln Met Thr Ser Leu 100 105 110	336
agg tot gag gac aca gcc atg tat tac tgt gca agg aga tgg ttt ott Arg Ser Glu Asp Thr Ala Met Tyr Tyr Cys Ala Arg Arg Trp Phe Leu 115 120 125	384
gac tgc tgg ggc caa ggc acc act ctc aca gtc tcc tcg Asp Cys Trp Gly Gln Gly Thr Thr Leu Thr Val Ser Ser 130 135 140	423
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Ser Arg Asp Asn Ala : 100	Lys Asn Thr Leu 105		Thr Ser Leu 110
Arg Ser Glu Asp Thr 2	Ala Met Tyr Tyr 120	Cys Ala Arg Arg 125	Trp Phe Leu
Asp Cys Trp Gly Gln (Gly Thr Thr Leu 135	Thr Val Ser Ser 140	
<210> 156 <211> 357 <212> DNA <213> Mus musculus			
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cag agt gtc acc atc t Gln Ser Val Thr Ile S 20			
ggc act agt tta atg of Gly Thr Ser Leu Met (
aaa ctc ctc atc tat of Lys Leu Leu Ile Tyr (
agg ttt agt ggc agt g Arg Phe Ser Gly Ser G	ggg tct ggg aca Gly Ser Gly Thr 70	gac ttc agc ctc Asp Phe Ser Leu 75	aac atc cat 240 Asn Ile His 80
cct gtg gag gag gat g Pro Val Glu Glu Asp F 85	gat att gca atg Asp Ile Ala Met	tat ttc tgt cag Tyr Phe Cys Gln 90	caa agt agg 288 Gln Ser Arg 95
aag gtt ccg tgg acg t Lys Val Pro Trp Thr F 100	ttc ggt gga ggc Phe Gly Gly Gly 105	Thr Lys Leu Glu	ata aag gac 336 Ile Lys Asp 110
tac aag gat gac gac g Tyr Lys Asp Asp Asp A 115			357

<211> 119

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<400> 157
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Gln Ser Val Thr Ile Ser Cys Arg Ala Ser Glu Ser Val Glu Tyr Tyr
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Gly Thr Ser Leu Met Gln Trp Tyr Gln Gln Lys Pro Gly Gln Pro Pro
                            40
Lys Leu Leu Ile Tyr Gly Ala Ser Asn Val Glu Ser Gly Val Pro Ala
    50
                        55
Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu Asn Ile His
65
                    70
Pro Val Glu Glu Asp Asp Ile Ala Met Tyr Phe Cys Gln Gln Ser Arg
                85
                                    90
Lys Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Asp
            100
                                105
Tyr Lys Asp Asp Asp Lys
        115
<210> 158
<211> 432
<212> DNA
<213> Mus musculus
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<221> CDS
<222>
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<400> 158
atg gtt ctt gcc agc tct acc acc agc atc cac acc atg ctg ctc ctg
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Met Val Leu Ala Ser Ser Thr Thr Ser Ile His Thr Met Leu Leu Leu
                                    10
etc etg atg etg gee cag eeg gee atg geg cag gtt cag etc cag caa
                                                                      96
Leu Leu Met Leu Ala Gln Pro Ala Met Ala Gln Val Gln Leu Gln Gln
                                25
tct gga cct gag ctg gtg aag cct ggg gcc tca gtg aag att tcc tgc
                                                                     144
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	Gly	Pro 35	Glu	Leu	Val	Lys	Pro 40	Gly	Ala	Ser	Val	Lys 45	Ile	Ser	Сув	
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			gga Gly											Pro		240
_		_	act Thr					_		_		_	_		_	288
	_	_	aaa Lys 100			_		_		_			_	_	_	336
			gac Asp													384
			gct Ala													432
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Thr Ala Asp	Lys Ser Ser 100	Ser Thr	Ala Tyr 105	Met Gln	Leu Ser 110	Ser Leu	
Thr Ser Glu 115	Asp Ser Ala	a Val Tyr 120	_	Ala Arg	Ala Arg 125	Lys Thr	
Ser Trp Phe 130	Ala Tyr Tr	Gly Gln 135	Gly Thr	Leu Val 140	Thr Val	Ser Ala	
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gac agg gtc Asp Arg Val							96
ata gcc tgg Ile Ala Trp 35							144
tac ttg gca Tyr Leu Ala 50							192
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gaa gac ttg Glu Asp Leu	gca gag tat Ala Glu Tyr 85	ttc tgt Phe Cys	cag caa Gln Gln 90	tat agc Tyr Ser	agc tct Ser Ser	ccg ctc Pro Leu 95	288
acg ttc ggt of Thr Phe Gly	gct ggg acc Ala Gly Thr 100	aag ctg Lys Leu	gaa ata Glu Ile 105	aag gac Lys Asp	tac aag Tyr Lys 110	gat gac Asp Asp	336
gac gat aag Asp Asp Lys 115							345

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<210> 161
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<211> 115

<212> PRT

<213> Mus musculus

<400> 161

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Asp Arg Val Ser Ile Ser Cys Lys Ala Ser Gln Asn Val Gly Asn Ile 20 25 30

Ile Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Ala Leu Ile 35 40 45

Tyr Leu Ala Ser Tyr Arg Tyr Ser Gly Val Pro Asp Arg Phe Thr Gly 50 55 60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Asn Val Gln Ser 65 70 75 80

Glu Asp Leu Ala Glu Tyr Phe Cys Gln Gln Tyr Ser Ser Ser Pro Leu 85 90 95

Thr Phe Gly Ala Gly Thr Lys Leu Glu Ile Lys Asp Tyr Lys Asp Asp 100 105 110

Asp Asp Lys 115

<210> 162

<211> 116 <212> PRT

<213> Mus musculus

<400> 162

Asp Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Lys Pro Ser Gln
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Ser Leu Ser Leu Thr Cys Thr Val Thr Gly Tyr Ser Ile Thr Ser Asp 20 25 30

Tyr Ala Trp Ser Trp Ile Arg Gln Leu Pro Gly Asn Lys Leu Glu Trp 35 40 45

Met Gly Tyr Ile Thr Tyr Ser Gly Tyr Ser Ile Tyr Asn Pro Ser Leu 50 55 60

Lys Ser Arg Ile Ser Ile Ser Arg Asp Thr Ser Lys Asn Gln Leu Phe 65 70 75 80

Leu Gln Leu Asn Ser Val Thr Thr Glu Asp Thr Ala Thr Tyr Tyr Cys
85 90 95

Val Gly Gly Tyr Asp Asn Met Asp Tyr Trp Gly Gln Gly Thr Ser Val 100 105 110

Thr Val Ser Ser 115

<210> 163

<211> 108

<212> PRT

<213> Mus musculus

<400> 163

Gln Ile Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly
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Glu Lys Val Thr Leu Thr Cys Ser Ala Ser Ser Ser Val Ser Ser Ser Ser 20 25 30

His Leu Tyr Trp Tyr Gln Gln Lys Pro Gly Ser Ser Pro Lys Leu Trp 35 40 45

Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser 50 55 60

Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Asn Met Glu
65 70 75 80

Thr Glu Asp Ala Ala Ser Tyr Phe Cys His Gln Trp Ser Ser Tyr Pro 85 90 95

Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
100 105

<211> 1924 <212> DNA <213> Macaca fascicularis <220> CDS <221> <222> (11)..(1918) <400> 164 gaattccacc atg ccc tcc tgg gcc ctc ttc atg gtc acc tcc tgc ctc 49 Met Pro Ser Trp Ala Leu Phe Met Val Thr Ser Cys Leu ctc ctg gcc cct caa aac ctg gcc caa gtc agc agc caa gat gtc tcc 97 Leu Leu Ala Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser ttg ctg gcc tcg gac tca gag ccc ctg aag tgt ttc tcc cga aca ttt 145 Leu Leu Ala Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe 30 35 gag gac ctc act tgc ttc tgg gat gag gaa gag gca gca ccc agt ggg 193 Glu Asp Leu Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly 50 aca tac cag ctg ctg tat gcc tac ccg ggg gag aag ccc cgt gcc tgc 241 Thr Tyr Gln Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys ccc ctg agt tct cag agc gtg ccc cgc ttt gga acc cga tac gtg tgc 289 Pro Leu Ser Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys 80 cag ttt cca gcc cag gaa gaa gtg cgt ctc ttc tct ccg ctg cac ctc 337 Gln Phe Pro Ala Gln Glu Glu Val Arg Leu Phe Ser Pro Leu His Leu 100 tgg gtg aag aat gtg ttc cta aac cag act cag att cag cga gtc ctc 385 Trp Val Lys Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu 115 120 ttt gtg gac agt gta ggc ctg ccg gct ccc ccc agt atc atc aag gcc 433 Phe Val Asp Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala 130 135 atg ggt ggg agc cag cca ggg gaa ctt cag atc agc tgg gag gcc cca 481 Met Gly Gly Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro 145 150 gct cca gaa atc agt gat ttc ctg agg tac gaa ctc cgc tat ggc ccc 529 Ala Pro Glu Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro 160 aaa gat ctc aag aac tcc act ggt ccc acg gtc ata cag ttg atc gcc 577 Lys Asp Leu Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala 175

						gct Ala										625
						gct Ala										673
	_	_				act Thr	_	_	_		_	_		_		721
						tca Ser			_							769
_		_	-	-	_	cct Pro 260	_									817
						gtg Val										865
						ttt Phe										913
						cat His										961
						ccc Pro										1009
						aca Thr 340										1057
tct Ser 350	cgc Arg	tgc Cys	cac His	ttc Phe	aag Lys 355	tca Ser	cga Arg	aat Asn	gac Asp	agc Ser 360	gtt Val	att Ile	cac His	atc Ile	ctt Leu 365	1105
gtg Val	gag Glu	gtg Val	acc Thr	aca Thr 370	gcc Ala	ctg Leu	ggt Gly	gct Ala	gtt Val 375	cac His	agt Ser	tac Tyr	ctg Leu	ggc Gly 380	tcc Ser	1153
						gct Ala										1201
						ggg Gly										1249
tca	tcc	tgg	gca	gcc	caa	gag	acc	tgc	tat	caa	ctc	cga	tac	aca	gga	1297

Ser	Ser 415	Trp	Ala	Ala	Gln	Glu 420	Thr	Cys	Tyr	Gln	Leu 425	Arg	Tyr	Thr	Gly	
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			_		ctg Leu	_	_	_		_		_		_	_	1393
	_				ggc Gly								_	_		1441
					gtg Val											1489
_			_	_	ctg Leu			_			_	_	_	_		1537
			_		tgg Trp 515	_			_				_	_		1585
					tca Ser			_	_		_	_			_	1633
					gca Ala											1681
					gtg Val											1729
					cct Pro											1777
					cag Gln 595											1825
gtg Val	tgc Cys	cca Pro	ccc Pro	atg Met 610	gct Ala	gag Glu	tca Ser	ggg Gly	tcc Ser 615	tgc Cys	tgt Cys	acc Thr	acc Thr	cac His 620	att Ile	1873
gcc Ala	aac Asn	cat His	tcc Ser 625	tac Tyr	cta Leu	cca Pro	cta Leu	agc Ser 630	tat Tyr	tgg Trp	cag Gln	cag Gln	cct Pro 635	tga		1918
gtcg	ac															1924

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- <212> PRT
- <213> Macaca fascicularis

<400> 165

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Pro Gln Asn Leu Ala Gln Val Ser Ser Gln Asp Val Ser Leu Leu Ala 20 25 30

Ser Asp Ser Glu Pro Leu Lys Cys Phe Ser Arg Thr Phe Glu Asp Leu 35 40 45

Thr Cys Phe Trp Asp Glu Glu Glu Ala Ala Pro Ser Gly Thr Tyr Gln
50 55 60

Leu Leu Tyr Ala Tyr Pro Gly Glu Lys Pro Arg Ala Cys Pro Leu Ser 65 70 75 80

Ser Gln Ser Val Pro Arg Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro 85 90 95

Ala Gln Glu Val Arg Leu Phe Ser Pro Leu His Leu Trp Val Lys 100 105 110

Asn Val Phe Leu Asn Gln Thr Gln Ile Gln Arg Val Leu Phe Val Asp 115 120 125

Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly 130 135 140

Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Ala Pro Ala Pro Glu 145 150 155 160

Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Lys Asp Leu 165 170 175

Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
180 185 190

Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln 195 200 205

Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln 210 215 220

Thr Ser Pro Thr Arg Glu Ala Ser Ala Leu Thr Ala Val Gly Gly Ser 225 230 235 240

Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu 245 250 255

Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp 260 265 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Ile Gly 275 280 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln 290 295 300

Gln Glu Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala 305 310 315 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asp Cys Glu Glu 325 330 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Val Ile His Ile Leu Val Glu Val 355 360 365

Thr Thr Ala Leu Gly Ala Val His Ser Tyr Leu Gly Ser Pro Phe Trp 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu 385 . 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His

420	425	430
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Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro 465 470 475 480

Ala Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr 485 490 495

Ala Leu Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu Leu 500 505 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu 515 520 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg 530 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys 545 550 555 560

Glu Glu Val Glu Pro Ser Leu Leu Glu Ile Leu Pro Lys Ser Ser Glu
565 570 575

Arg Thr Pro Leu Pro Leu Cys Ser Ser Gln Ser Gln Met Asp Tyr Arg
580 585 590

Arg Leu Gln Pro Ser Cys Leu Gly Thr Met Pro Leu Ser Val Cys Pro 595 600 605

Pro Met Ala Glu Ser Gly Ser Cys Cys Thr Thr His Ile Ala Asn His 610 620

Ser Tyr Leu Pro Leu Ser Tyr Trp Gln Gln Pro 625 630 635

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<211> 23
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<213> Artificial
<220>
<223> an artificially synthesized sequence
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gctcactgga tggtgggaag atg
                                                                      23
<210> 168
<211> 30
<212> DNA
<213> Artificial
<220>
<223> an artificially synthesized primer sequence
<400> 168
tagaattcca ccatggaatg gcctttgatc
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<211> 56
<212> DNA
<213> Artificial
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<400> 169
agcctgagtc atcacaatat ccgatccgcc tccacctgca gagacagtga ccagag
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<210> 170
<211> 56
<212> DNA
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<210> 171
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<212> DNA
<213> Artificial
<220>
<223> an artificially synthesized primer sequence
<400> 171
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<210> 172
<211> 8
<212> PRT
<213> Artificial
<220>
<223> an artificially synthesized FLAG tag sequence
<400> 172
Asp Tyr Lys Asp Asp Asp Lys
<210> 173
<211> 85
<212> DNA
<213> Artificial
<220>
<223>
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<400> 173
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gtccactccc aggttcagct gcagc
                                                                     85
<210> 174
<211> 82
<212>
      DNA
<213> Artificial
<220>
<223>
      an artificially synthesized primer sequence
<400> 174
tggtcactgt ctctgcaggt ggtggtggtt cgggtggtgg tggttcgggt ggtggcggat
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cggatattgt gatgactcag gc
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<210> 175

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<211> 82
<212> DNA
<213> Artificial
<220>
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cctgcagaga cagtgaccag ag
                                                                      82
<210> 176
<211> 25
<212> DNA
<213> Artificial
<220>
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<400> 176
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<211> 81
<212> DNA
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<220>
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cttttatttc cagcttggtc c
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<210> 179
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<212> DNA
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<220>
<223> an artificially synthesized primer sequence
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<210> 181
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					caa Gln											1297
					tgg Trp 435											1345
					ctg Leu											1393
					ggc Gly											1441
					gtg Val											1489
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ctg Leu 510	ctg Leu	ctg Leu	ctg Leu	agg Arg	tgg Trp 515	cag Gln	ttt Phe	cct Pro	gca Ala	cac His 520	tac Tyr	agg Arg	aga Arg	ctg Leu	agg Arg 525	1585

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					gca Ala											1681
_		_	_	_	gtg Val	_		_			_				_	1729
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Ser	Asp	Ser 35	Glu	Pro	Leu	Lys	Cys 40	Phe	Ser	Arg	Thr	Phe 45	Glu	Asp	Leu	
Thr	Cys 50	Phe	Trp	Asp	Glu	Glu 55	Glu	Ala	Ala	Pro	Ser 60	Gly	Thr	Tyr	Gln	

Leu Leu Tyr Ala Tyr Pro Arg Glu Lys Pro Arg Ala Cys Pro Leu Ser 65 70 75 80

Ser Gln Ser Met Pro His Phe Gly Thr Arg Tyr Val Cys Gln Phe Pro 85 90 95

Asp Gln Glu Val Pro Leu Phe Phe Pro Leu His Leu Trp Val Lys 100 105 110

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Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr
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Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
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Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln 210 215 220

Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser 225 230 235 240

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Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp 260 265 270

Ser Leu Pro Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly 275 280 285

Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln 290 295 300

Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala 305 310 315 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu 325 330 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val 355 360 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu 385 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp 405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
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Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro 465 470 475 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr 485 490 495

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Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu 515 520 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg

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gag gac ctc act tgc ttc Glu Asp Leu Thr Cys Phe 50														
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_			_	_	gag Glu	_		_				_	_			337
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					ggc Gly											433
					cca Pro											481
					gat Asp											529
					tcc Ser											577
				_	cct Pro 195	_	_	_	_				_		_	625
					tgt Cys	_	_			_				_		673
					cca Pro											721
ggt Gly	gga Gly	agc Ser 240	tgc Cys	ctc Leu	atc Ile	tca Ser	gga Gly 245	ctc Leu	cag Gln	cct Pro	ggc Gly	aac Asn 250	tcc Ser	tac Tyr	tgg Trp	769
ctg Leu	cag Gln 255	ctg Leu	tgc Cys	agc Ser	gaa Glu	cct Pro 260	gat Asp	ggg Gly	atc Ile	tcc Ser	ctc Leu 265	ggt Gly	ggc Gly	tcc Ser	tgg Trp	817
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caa	tgg	cag	caa	cag	gac	cat	gct	agc	tcc	caa	ggc	ttc	ttc	tac	cac	961

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					gtg Val											;	1489
					cat His											:	1537
					tgg Trp 515											:	1585
cat His	gcc Ala	ctg Leu	tgg Trp	ccc Pro	tca Ser	ctt Leu	cca Pro	gac Asp	ctg Leu	cac His	cgg Arg	gtc Val	cta Leu	ggc Gly	cag Gln	:	1633

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gac tac cga ag Asp Tyr Arg Ar 590				Leu C						1825
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Ser	Val 130	Gly	Leu	Pro	Ala	Pro 135	Pro	Ser	Ile	Ile	Lys 140	Ala	Met	Gly	Gly
Ser 145	Gln	Pro	Gly	Glu	Leu 150	Gln	Ile	Ser	Trp	Glu 155	Glu	Pro	Ala	Pro	Glu 160
Ile	Ser	Asp	Phe	Leu 165	Arg	Tyr	Glu	Leu	Arg 170	Tyr	Gly	Pro	Arg	Asp 175	Pro
Lys	Asn	Ser	Thr 180	Gly	Pro	Thr	Val	Ile 185	Gln	Leu	Ile	Ala	Thr 190	Glu	Thr
Cys	Сув	Pro 195	Ala	Leu	Gln	Arg	Pro 200	His	Ser	Ala	Ser	Ala 205	Leu	Asp	Gln
Ser	Pro 210	Cys	Ala	Gln	Pro	Thr 215	Met	Pro	Trp	Gln	Asp 220	Gly	Pro	Lys	Gln
Thr 225	Ser	Pro	Ser	Arg	Glu 230	Ala	Ser	Ala	Leu	Thr 235	Ala	Glu	Gly	Gly	Ser 240
Cys	Leu	Ile	Ser	Gly 245	Leu	Gln	Pro	Gly	Asn 250	Ser	Tyr	Trp	Leu	Gln 255	Leu
Cys	Ser	Glu	Pro 260	Asp	Gly	Ile	Ser	Leu 265	Gly	Gly	Ser	Trp	Gly 270	Ser	Trp
Ser	Leu	Pro 275	Val	Thr	Val	Asp	Leu 280	Pro	Gly	Asp	Ala	Val 285	Ala	Leu	Gly
Leu	Gln 290	Cys	Phe	Thr	Leu	Asp 295	Leu	Lys	Asn	Val	Thr 300	Cys	Gln	Trp	Gln
Gln 305	Gln	Asp	His	Ala	Ser 310	Ser	Gln	Gly	Phe	Phe 315	Tyr	His	Ser	Arg	Ala 320

Arg Cys Cys Pro Arg Asp Arg Tyr Pro Ile Trp Glu Asn Cys Glu Glu 325 330 335

Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val 355 360 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu 385 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp 405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
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Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro 465 470 475 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr 485 490 495

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Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu 515 520 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg 530 540

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	Glu	Glu	Val	Glu	Pro 565	Ser	Leu	Leu	Glu	Ile 570	Leu	Pro	Lys	Ser	Ser 575	Glu	
	Arg	Thr	Pro	Leu 580	Pro	Leu	Cys	Ser	Ser 585	Gln	Ala	Gln	Met	Asp 590		Arg	
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	Pro	Met 610	Ala	Glu	Ser	Gly	Ser 615	Cys	Cys	Thr	Thr	His 620	Ile	Ala	Asn	His	
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_	_		_			aca Thr 340					_			_		1057
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Gly	Gly	Thr	Leu	Glu 450	Leu	cgc Arg	Pro	Arg	Ser 455	Arg	Tyr	Arg	Leu	Gln 460	Leu	1393
Arg	Ala	Arg	Leu 465	Asn	Gly	ccc Pro	Thr	Tyr 470	Gln	Gly	Pro	Trp	Ser 475	Ser	Trp	1441
Ser	Asp	Pro 480	Thr	Arg	Val	gag Glu	Thr 485	Ala	Thr	Glu	Thr	Ala 490	Trp	Ile	Ser	1489
Leu	Val 495	Thr	Ala	Leu	His	cta Leu 500	Val	Leu	Gly	Leu	Ser 505	Ala	Val	Leu	Gly	1537
Leu 510	Leu	Leu	Leu	Arg	Trp 515	cag Gln	Phe	Pro	Ala	His 520	Tyr	Arg	Arg	Leu	Arg 525	1585
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- Ser Val Gly Leu Pro Ala Pro Pro Ser Ile Ile Lys Ala Met Gly Gly 130 135 140
- Ser Gln Pro Gly Glu Leu Gln Ile Ser Trp Glu Glu Pro Ala Pro Glu 145 150 155 160
- Ile Ser Asp Phe Leu Arg Tyr Glu Leu Arg Tyr Gly Pro Arg Asp Pro 165 170 175
- Lys Asn Ser Thr Gly Pro Thr Val Ile Gln Leu Ile Ala Thr Glu Thr 180 185 190
- Cys Cys Pro Ala Leu Gln Arg Pro His Ser Ala Ser Ala Leu Asp Gln
 195 200 205
- Ser Pro Cys Ala Gln Pro Thr Met Pro Trp Gln Asp Gly Pro Lys Gln 210 215 220
- Thr Ser Pro Ser Arg Glu Ala Ser Ala Leu Thr Ala Glu Gly Gly Ser 225 230 235 240
- Cys Leu Ile Ser Gly Leu Gln Pro Gly Asn Ser Tyr Trp Leu Gln Leu 245 250 255
- Arg Ser Glu Pro Asp Gly Ile Ser Leu Gly Gly Ser Trp Gly Ser Trp 260 265 270
- Ser Leu Thr Val Thr Val Asp Leu Pro Gly Asp Ala Val Ala Leu Gly 275 280 285
- Leu Gln Cys Phe Thr Leu Asp Leu Lys Asn Val Thr Cys Gln Trp Gln 290 295 300
- Gln Gln Asp His Ala Ser Ser Gln Gly Phe Phe Tyr His Ser Arg Ala 305 310 315 320

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Glu Glu Lys Thr Asn Pro Gly Leu Gln Thr Pro Gln Phe Ser Arg Cys 340 345 350

His Phe Lys Ser Arg Asn Asp Ser Ile Ile His Ile Leu Val Glu Val 355 360 365

Thr Thr Ala Pro Gly Thr Val His Ser Tyr Leu Gly Ser Pro Phe Trp 370 375 380

Ile His Gln Ala Val Arg Leu Pro Thr Pro Asn Leu His Trp Arg Glu 385 390 395 400

Ile Ser Ser Gly His Leu Glu Leu Glu Trp Gln His Pro Ser Ser Trp
405 410 415

Ala Ala Gln Glu Thr Cys Tyr Gln Leu Arg Tyr Thr Gly Glu Gly His
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Gln Asp Trp Lys Val Leu Glu Pro Pro Leu Gly Ala Arg Gly Gly Thr 435 440 445

Leu Glu Leu Arg Pro Arg Ser Arg Tyr Arg Leu Gln Leu Arg Ala Arg 450 455 460

Leu Asn Gly Pro Thr Tyr Gln Gly Pro Trp Ser Ser Trp Ser Asp Pro 465 470 475 480

Thr Arg Val Glu Thr Ala Thr Glu Thr Ala Trp Ile Ser Leu Val Thr 485 490 495

Ala Leu His Leu Val Leu Gly Leu Ser Ala Val Leu Gly Leu Leu 500 505 510

Leu Arg Trp Gln Phe Pro Ala His Tyr Arg Arg Leu Arg His Ala Leu 515 520 525

Trp Pro Ser Leu Pro Asp Leu His Arg Val Leu Gly Gln Tyr Leu Arg 530 540

Asp Thr Ala Ala Leu Ser Pro Pro Lys Ala Thr Val Ser Asp Thr Cys

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Arg Thr Pro Leu Pro I 580	Leu Cys Ser Ser 585		sp Tyr Arg 90
Arg Leu Gln Pro Ser (595	Cys Leu Gly Thi 600	r Met Pro Leu Ser V 605	al Cys Pro
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ggcagtggat	caggcacagc	ttttacactg	aaaatcagca	gagtggaggc	tgaggatgtt	1500
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<210> 254

<211> 524

<212> PRT

<213> Homo sapiens

<400> 254

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Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys 20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe 35 40 45

Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu 50 55 60

Glu Trp Val Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn

70 75 80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser 85 90 95 Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val 100 $$ 105 $$ 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 130 135 140

Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Ala 145 150 155 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg 165 170 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp
180 185 190

Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met 195 200 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser 210 215 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val 225 230 235 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly 245 250 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly 260 265 270

Gly Ser Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro 275 280 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser 290 295 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro 305 310 315 320

Gly Lys Gly Leu Glu Trp Val Gly Arg Ile Tyr Pro Gly Asp Gly Glu 325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp 340 345 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu 355 360 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe 370 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly 385 390 395

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met 405 410 415

Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser 420 425 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr
435 440 445

Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu 450 455 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser 465 470 475 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu 485 490 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
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Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 515 520

<210> 255

<211> 354

<212> DNA

<213> Homo sapiens

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cctggaaagg gtcttgagtg ggttggacgg atttatcctg gagatggaga aactatctac 180
aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atggagctga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300
gatgattact cgtttgctta ctggggccag ggaaccacgg tcaccgtctc ttca 354

<210> 256

<211> 118

<212> PRT

<213> Homo sapiens

<400> 256

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser 20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe 50 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr 100 105 110

Thr Val Thr Val Ser Ser 115

<210> 257

<211> 336

<212> DNA

<213> Homo sapiens

<400> 257
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tacctgcaga agccagggca gtctccacag ctcctgatct atcggatgtc caaccttgcc 180
tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagcttttac actgaaaatc 240
agcagagtgg aggctgagga tgttggggtt tattactgca tgcaacatat agaatatcct 300
tttacgttcg gccaagggac caaactggaa atcaaa 336

<210> 258

<211> 112

<212> PRT

<213> Homo sapiens

<400> 258

Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 259

<211> 1572

<212> DNA

<213> Homo sapiens

<400> 259

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tgcaaggctt ctgg	gatacac cttca	ccaac teetgg	atga actggatca	g gcagaggcct	180
ggaaagggtc ttga	agtggat tggac	ggatt tatcct	ggag atggagaaa	c tatctacaat	240
gggaaattca gggt	cagagt cacga	tacc geggac	gaat ccacgagca	c agcctacatg	300
gagetgagea geet	gagato tgagga	acacg gccgtg	tatt actgtgcga	g aggctatgat	360
gattactcgt ttgc	cttactg gggcca	aggga accetg	gtca ccgtctctt	c aggtggtggt	420
ggatccggag gtgg	gtggatc gggtgg	gtgga ggatcg	gata ttgtgatga	c tcagtctgca	480
ctctccctgc ccgt	cacccc tggaga	ageeg geetee	atct cctgcaggt	c tagtaagagt	540
ctcctgcata gtaa	atggcaa cactta	acttg tattgg	tacc tgcagaagc	c agggcagtct	600
ccacagetee tgat	ctatcg gatgto	ccaac cttgcc	tcag gggtccctg	a caggttcagt	660
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ggggtttatt actg	gcatgca acata	tagaa tatcct	ttta cgttcggcc	a agggaccaaa	780
ctggaaatca aagg	gaggtgg tggato	egggt ggtggt	ggtt cgggaggcg	g tggatcgcag	840
gtgcagctgg tgca	agtetgg acetga	aggtg aagaag	cctg gggcctcag	t gaaggtetee	900
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gagctgagca gcct	gagato tgagga	acacq qccqtq	tatt actqtqcqa	g aggctatgat	1140
gattactcgt ttgc					1200
ggatccggag gtgg					1260
ctctccctgc ccgt					1320
ctcctgcata gtaa					1380
ccacagetee tgat					1440
ggcagtggat cagg					1500
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<211> 524

<212> PRT

<213> Homo sapiens

<400> 260

Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly 1 5 10 15

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys 20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe 35 40 45

Thr Asn Ser Trp Met Asn Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu 50 55 60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn 65 70 75 80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser 85 90 95

Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val 100 105 110

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 130 135 140

Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Ala 145 150 155 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg 165 170 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp 180 185 190

Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met 195 200 205 Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser 210 215 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val 225 230 235 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly
245 250 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly 260 265 270

Gly Ser Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro 275 280 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser 290 295 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Ile Arg Gln Arg Pro 305 310 315 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu 325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp 340 345 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu 355 360 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe 370 380

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Gly Gly 385 390 395 400

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met
405 410 415

Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser 420 425 430

Ile	Ser	Cys 435	Arg	Ser	Ser	Lys	Ser 440	Leu	Leu	His	Ser	Asn 445	Gly	Asn	Thr	
Tyr	Leu 450	Tyr	Trp	Tyr	Leu	Gln 455	Lys	Pro	Gly	Gln	Ser 460	Pro	Gln	Leu	Leu	
Ile 465	Tyr	Arg	Met	Ser	Asn 470	Leu	Ala	Ser	Gly	Val 475	Pro	Asp	Arg	Phe	Ser 480	
Gly	Ser	Gly	Ser	Gly 485	Thr	Ala	Phe	Thr	Leu 490	Lys	Ile	Ser	Arg	Val 495	Glu	
Ala	Glu	Asp	Val 500	Gly	Val	Tyr	Tyr	Cys 505	Met	Gln	His	Ile	Glu 510	Tyr	Pro	
Phe	Thr	Phe 515	Gly	Gln	Gly	Thr	Lys 520	Leu	Glu	Ile	Lys					
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cct	ggaaa	agg g	gtett	gagt	g ga	ittgg	gacgo	g att	tato	ctg	gaga	itgga	ıga a	aacta	itctac	180
aatg	ggaa	aat t	cago	ggtca	ag ag	gtcac	gatt	aco	gege	gacg	aato	cace	jag d	cacaç	jcctac	240
atgg	gagct	ga g	gcago	ctga	ag at	ctga	ıggad	acc	gccg	gtgt	atta	ctgt	gc g	gagag	gctat	300
gato	gatta	act o	gttt	gctt	a ct	gggg	ccag	g gga	acco	tgg	tcac	cgto	tc t	tca		354
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Gln 1	Val	Gln	Leu	Val 5	Gln	Ser	Gly	Pro	Glu 10	Val	Lys	Lys	Pro	Gly 15	Ala	
Ser	Val	Lys	Val 20	Ser	Cys	Lys	Ala	Ser 25	Gly	Tyr	Thr	Phe	Thr 30	Asn	Ser	

Trp Met Asn Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe 50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr
65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr
100 105 110

Leu Val Thr Val Ser Ser

<210> 263

<211> 1572

<212> DNA

<213> Mus musculus

<400> 263

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gggaaattca	gggtcaaggc	cacactgact	gcagacaaat	cctccagcac	agcctacatg	1080
gatatcagca	gcctgacatc	tgaggactct	gcggtctact	tctgtgcaag	aggctatgat	1140
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cctcaactcc	tgatatatcg	gatgtccaac	cttgcctcag	gagtcccaga	taggttcagt	1440
ggcagtgggt	caggaactgc	tttcacactg	agaatcagta	gagtggaggc	tgaggatgtg	1500
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ctggaaataa	aa					1572

<210> 264

<211> 524

<212> PRT

<213> Mus musculus

<400> 264

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Val His Ser Gln Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys 20 25 30

Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe 35 40 45

Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu 50 55 60

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn 65 70 75 80

Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser

85 90 95

Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu Asp Ser Ala Val 100 105 110

Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly Gly Gly Ser Gly Gly 130 135 140

Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ala Ala 145 150 155 160

Pro Ser Ile Pro Val Thr Pro Gly Glu Ser Val Ser Ile Ser Cys Arg 165 170 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp 180 185 190

Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met
195 200 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser 210 220

Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val 225 230 235 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly 245 250 255

Ser Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly 260 265 270

Gly Ser Gly Gly Gly Ser Gln Val Gln Leu Gln Gln Ser Gly Pro 275 280 285

Glu Leu Val Lys Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser 290 295 300

Gly Tyr Ala Phe Thr Asn Ser Trp Met Asn Trp Val Lys Gln Arg Pro 305 310 315 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu 325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Lys Ala Thr Leu Thr Ala Asp 340 345 350

Lys Ser Ser Ser Thr Ala Tyr Met Asp Ile Ser Ser Leu Thr Ser Glu 355 360 365

Asp Ser Ala Val Tyr Phe Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe 370 375 380

Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Gly Gly 385 390 395 400

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met 405 410 415

Thr Gln Ala Ala Pro Ser Ile Pro Val Thr Pro Gly Glu Ser Val Ser 420 425 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr 435 440 445

Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser Pro Gln Leu Leu 450 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser 465 470 475 480

Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile Ser Arg Val Glu 485 490 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
500 505 510

Phe Thr Phe Gly Ser Gly Thr Lys Leu Glu Ile Lys 515 520

<210> 265 <211> 30

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<212> PRT
<213> Homo sapiens
<400> 265
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
<210> 266
<211> 5
<212> PRT
<213> Homo sapiens
<400> 266
Asn Ser Trp Met Asn
<210> 267
<211> 14
<212> PRT
<213> Homo sapiens
<400> 267
Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Val Gly
<210> 268
<211> 17
<212> PRT
<213> Homo sapiens
<400> 268
Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe Arg
Val
<210> 269
<211>
      32
<212>
      PRT
<213> Homo sapiens
<400> 269
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Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr Met Glu
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Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
<210> 270
<211> 9
<212> PRT
<213> Homo sapiens
<400> 270
Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr
    5 /
<210> 271
<211> 11
<212> PRT
<213> Homo sapiens
<400> 271
Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser
               5
<210> 272
<211> 23
<212> PRT
<213> Homo sapiens
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Asp Ile Val Met Thr Gln Ser Ala Leu Ser Leu Pro Val Thr Pro Gly
1 5
Glu Pro Ala Ser Ile Ser Cys
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<210> 273
<211> 16
<212> PRT
<213> Homo sapiens
<400> 273
Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr
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<210> 274

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<211> 15
<212> PRT
<213> Homo sapiens
<400> 274
Trp Tyr Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
               5
                                  10
<210> 275
<211> 7
<212> PRT
<213> Homo sapiens
<400> 275
Arg Met Ser Asn Leu Ala Ser
    5
<210> 276
<211> 32
<212> PRT
<213> Homo sapiens
<400> 276
Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr
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                                  10
Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys
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<213> Homo sapiens
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Met Gln His Ile Glu Tyr Pro Phe Thr
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<211> 10
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<400> 278
Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
               5
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<211> 30
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<213> Homo sapiens
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr
<210> 280
<211> 5
<212> PRT
<213> Homo sapiens
<400> 280
Asn Ser Trp Met Asn
<210> 281
<211> 14
<212> PRT
<213> Homo sapiens
<400> 281
Trp Ile Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly
<210> 282
<211> 17
<212> PRT
<213> Homo sapiens
<400> 282
Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe Arg
Val
<210> 283
<211> 32
<212> PRT
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<213> Homo sapiens
<400> 283
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Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
<210> 284
<211> 9
<212> PRT
<213> Homo sapiens
<400> 284
Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr
                5
<210> 285
<211>
       11
<212>
      PRT
<213> Homo sapiens
<400> 285
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
                5
<210> 286
<211> 1572
<212> DNA
<213>
      Homo sapiens
<400> 286
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                                                                     120
tgcaaggctt ctggatacac cttcaccaac tcctggatga actgggtgag gcagaggcct
                                                                     180
ggaaagggtc ttgagtggat tggacggatt tatcctggag atggagaaac tatctacaat
                                                                     240
gggaaattca gggtcagagt cacgattacc gcggacgaat ccacgagcac agcctacatg
                                                                     300
caactgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgag aggctatgat
                                                                     360
gattactcgt ttgcttactg gggccaggga accacggtca ccgtctcttc aggtggtggt
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540

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ggggtttatt	actgcatgca	acatatagaa	tatcctttta	cgttcggcca	agggaccaaa	780
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ggcagtggat	caggcacaga	ttttacactg	aaaatcagca	gagtggaggc	tgaggatgtt	1500
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<210> 287

<211> 524

<212> PRT

<213> Homo sapiens

<400> 287

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Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys 20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe 35 40 45

Thr	Asn	Ser	Trp	Met	Asn	Trp	Val	Arg	Gln	Arg	Pro	Gly	Lys	Gly	Leu
	50					55					60				

Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn 65 70 75 80

Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser 85 90 95

Thr Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val

Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly
115 120 125

Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly 130 135 140

Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met Thr Gln Ser Pro 145 150 155 160

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg 165 170 175

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp 180 185 190

Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Arg Met 195 200 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser 210 215 220

Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val 225 230 235 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly 245 250 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly 260 265 270

Gly Ser Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro

1

275 280 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser 290 295 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro 305 310 315 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu 325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp 340 345 350

Glu Ser Thr Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Arg Ser Glu 355 360 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe 370 375 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly 385 390 395

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met 405 410 415

Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser 420 425 430

Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr 435 440 445

Tyr Leu Tyr Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu 450 455 460

Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser 465 470 475 480

Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile Ser Arg Val Glu 485 490 495

Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro
500 505 510

Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys

<210> 288

<211> 354

<212> DNA

<213> Homo sapiens

<400> 288

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cctggaaagg gtcttgagtg gattggacgg atttatcctg gagatggaga aactatctac 180
aatgggaaat tcagggtcag agtcacgatt accgcggacg aatccacgag cacagcctac 240
atgcaactga gcagcctgag atctgaggac acggccgtgt attactgtgc gagaggctat 300
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<210> 289

<211> 118

<212> PRT

<213> Homo sapiens

<400> 289

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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asn Ser 20 25 30

Trp Met Asn Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Arg Ile Tyr Pro Gly Asp Gly Glu Thr Ile Tyr Asn Gly Lys Phe 50 55 60

Arg Val Arg Val Thr Ile Thr Ala Asp Glu Ser Thr Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Tyr Asp Asp Tyr Ser Phe Ala Tyr Trp Gly Gln Gly Thr

Thr Val Thr Val Ser Ser

Thr Val Thr Val Ser Ser 115

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<212> DNA <213> Homo sapiens

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ttcctgcaga agccagggca gtctccacag ctcctgatct atcggatgtc caaccttgcc 180
tcaggggtcc ctgacaggtt cagtggcagt ggatcaggca cagattttac actgaaaatc 240
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336

<210> 291 <211> 112 <212> PRT <213> Homo sapiens

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<400> 291

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
1 5 10 15

Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Lys Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His 85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 \$105\$

<210> 292

<211> 1572

<212> DNA

<213> Homo sapiens

<400> 292

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gagctgagca	gcctgagatc	tgaggacacg	gccgtgtatt	actgtgcgag	aggctatgat	360
gattactcgt	ttgcttactg	gggccaggga	accacggtca	ccgtctcttc	aggtggtggt	420
ggatccggag	gtggtggatc	gggtggtgga	ggatcggata	ttgtgatgac	tcagtctcca	480
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ccacggctcc	tgatctatcg	gatgtccaac	cttgcctcag	gggtccctga	caggttcagt	660
ggcagtggat	caggcacagc	ttttacactg	aaaatcagca	gagtggaggc	tgaggatgtt	720
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155

175

170

Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg

145

150

165

Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr Tyr Leu Tyr Trp 180 185 190

Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr Arg Met 195 200 205

Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser 210 215 220

Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val 225 230 235 240

Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro Phe Thr Phe Gly 245 250 255

Gln Gly Thr Lys Leu Glu Ile Lys Gly Gly Gly Gly Ser Gly Gly Gly 260 265 270

Gly Ser Gly Gly Gly Ser Gln Val Gln Leu Val Gln Ser Gly Pro 275 280 285

Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser 290 295 300

Gly Tyr Thr Phe Thr Asn Ser Trp Met Asn Trp Val Arg Gln Arg Pro 305 310 315 320

Gly Lys Gly Leu Glu Trp Ile Gly Arg Ile Tyr Pro Gly Asp Gly Glu 325 330 335

Thr Ile Tyr Asn Gly Lys Phe Arg Val Arg Val Thr Ile Thr Ala Asp 340 345 350

Glu Ser Thr Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu 355 360 365

Asp Thr Ala Val Tyr Tyr Cys Ala Arg Gly Tyr Asp Asp Tyr Ser Phe 370 375 380

Ala Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser Ser Gly Gly Gly 385 390 395

Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Asp Ile Val Met 405 410 415											
Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly Glu Pro Ala Ser 420 425 430											
The Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser Asn Gly Asn Thr 435 440 445											
Tyr Leu Tyr Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu 450 455 460											
Tle Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro Asp Arg Phe Ser 465 470 475 480											
Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile Ser Arg Val Glu 485 490 495											
Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His Ile Glu Tyr Pro 500 505 510											
Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 515 520											
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210> 295											

<211> 118 <212> PRT

<213> Homo sapiens

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Ser	Val	Lys	Val 20	Ser	Cys	Lys	Ala	Ser 25	Gly	Tyr	Thr	Phe	Thr 30	Asn	Ser	
Trp	Met	Asn 35	Trp	Val	Arg	Gln	Arg 40	Pro	Gly	Lys	Gly	Leu 45	Glu	Trp	Ile	
Gly	Arg 50	Ile	Tyr	Pro	Gly	Asp 55	Gly	Glu	Thr	Ile	Tyr 60	Asn	Gly	Lys	Phe	
Arg 65	Val	Arg	Val	Thr	Ile 70	Thr	Ala	Asp	Glu	Ser 75	Thr	Ser	Thr	Ala	Tyr 80	
Met	Glu	Leu	Ser	Ser 85	Leu	Arg	Ser	Glu	Asp 90	Thr	Ala	Val	Tyr	Tyr 95	Cys	
Ala	Arg	Gly	Tyr 100	Asp	Asp	Tyr	Ser	Phe 105	Ala	Tyr	Trp	Gly	Gln 110	Gly	Thr	
Thr	Val	Thr 115	Val	Ser	Ser											
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															attgg	
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tcag	ıgggt	cc c	tgac	aggt	t ca	ıgtgg	cagt	gga	tcag	gca	cago	tttt	ac a	ictga	aaatc	240
agca	gagt	.gg a	ıggct	gagg	ja tg	ıttgg	ggtt	tat	tact	gca	tgca	acat	at a	ıgaat	atcct	300
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<213> Homo sapiens
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<400> 297

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Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Gln Gln Lys Pro Gly Gln Ala 35 40 45

Pro Arg Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Lys Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln His
85 90 95

Ile Glu Tyr Pro Phe Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
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<210> 298

<211> 30

<212> PRT

<213> Homo sapiens

<400> 298

Gln Val Gln Leu Val Gln Ser Gly Pro Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr 20 25 30

<210> 299

<211> 14

<212> PRT

<213> Homo sapiens

<400> 299

Trp Val Arg Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile Gly
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<211> 32
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<212> PRT
<213> Homo sapiens
<400> 301
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Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Pro Gly
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Glu Pro Ala Ser Ile Ser Cys
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<211> 15
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Trp Phe Leu Gln Lys Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr
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<210> 300

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<213> Homo sapiens
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Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
1 5
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Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala Arg
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<210> 307
<211> 15
<212> PRT
<213> Homo sapiens
<400> 307
Trp Phe Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile Tyr
               5
<210> 308
<211> 32
<212> PRT
<213> Homo sapiens
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Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr 1 $$ 5 $$ 10 $$ 15

Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys 20 25 30